

Application Serial No. 10/581,951
Reply to Office Action of February 9, 2009

PATENT
Docket: CU-4849

Amendments to the Specification

In the specification, please amend the paragraph beginning "According to a preferred..." on page 2, specifically amend lines 24-25 and 28, as follows:

According to a preferred embodiment of the invention, the extraction material comprises particles or beads coated with stationary phase (e.g. Chromesorb CHROMOSORB® (chromatographic stationary support material made from mined diatomite) coated with Carbowax CARBOWAX 20M® (additional polymers of ethylene oxide and water and their ethers)). According to another preferred embodiment, the extraction material comprises absorption materials such as are used in chromatography (e.g. Carbosieve S3CARBOSIEVE S3® (activated carbon), Carbopack CARBOPACK® (porous graphitized carbon black), Tenax TENAX® (carbon fiber), activated charcoal, etc.).

In the specification, please amend the paragraph beginning "For the purpose..." on page 3, specifically amend lines 30-31, as follows:

For the purpose of this description, the terms extraction material is to be understood as meaning that at least part of the interior of the extraction tube 9 between the hoops 11 is filled in the manner of a packing with the material. As extraction material, particles are used which are of the kind used as absorbents or as packing materials in gas chromatography, for example Tenax TENAX® (carbon fiber), CHROMOSORB® (chromatographic stationary support material made from mined diatomite)Chromesorb, Carbopack CARBOPACK® (porous graphitized carbon black), activated charcoal, etc. All the materials used, whether organic or inorganic, have the common property that molecules are adsorbed on their surface and are thus able to accumulate.

In the specification, please amend the paragraph beginning "Fig. 1..." on page 2, specifically amend line 36, as follows:

Fig. 1 shows a cross section through an embodiment of the device according to the invention, and

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In the specification, please amend the paragraph beginning "Figs 2-5..." on page 2, specifically amend line 37, as follows:

Figs. 2-5 show schematic representations of different method sequences.

In the specification, please amend the paragraph beginning "As shown in..." on page 3, specifically amend line 1, as follows:

As is shown in [[Fig.]] Figure 1, a gastight syringe 1 comprises a syringe body 2, and a plunger 3 which is axially movable in the latter. At its lower end, the syringe body has, as usual, an outlet opening 6 with a connector 7, which is configured as a Luer connector for example. An extraction tube 9 is connected to the connector 7 by means of an attachment piece 8. Arranged at the lower end of the extraction tube is the hollow needle 10 which, in standard syringes, would be fitted onto the Luer connector 7.

In the specification, please amend the paragraph beginning "Either, as is..." on page 4, specifically amend line 29, as follows:

Either, as is shown in [[Fig.]] Figure 2, the syringe needle is introduced into the gas space of the sample vial. By repeated intake and ejection of the gas with the syringe, the substances to be analyzed are transferred at least partially to the extraction material.

In the specification, please amend the paragraph beginning "For thermal..." on page 5, specifically amend line 35, as follows:

For thermal desorption, there are once again several possibilities, in each case with simultaneous heating of the packing. It can either be carried out, as is shown in [[Fig.]] Figure 4, by delivering a clean gas through a gas inlet 17 arranged between the syringe and the packing. This procedure is the most elegant, but also the most complicated way of bringing the substances from the filter into the gas chromatography. Since the syringe plunger is pressed fully down and the lateral gas

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admission line has only a very small volume during the injection, the danger of gas flowing in the wrong direction is negligible. The desorption gas pressure must be slightly higher than the gas pressure in the injector. In this procedure, the substances are moreover transferred gently into the analytical device, because only gas that is free of oxygen can be used. However, the procedure requires an additional valve and a pressure control means, i.e. a certain level of expenditure in terms of equipment.

In the specification, please amend the paragraph beginning "Alternatively, as is..." on page 6, specifically amend line 13, as follows:

Alternatively, as is shown in [[Fig. 1]] Figure 5, it can be carried out using gas from the sample vial. This procedure is technically the simplest, since no additional gas valves or appliances are required. However, it has the disadvantage that the substances to be analyzed are exposed to higher temperatures and oxygen during the desorption, which can lead to oxidation of the substances. This procedure is suitable, however, for analyzing chemically stable compounds such as hydrocarbons or chlorinated solvents.